



MARKED-UP VERSION OF CLAIMS



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1. (Once amended) A method of replicating content data stored on a first-central content server to at least one second-local content server, comprising the steps of:

determining unused bandwidth on a common link of an access data network, carrying subscriber traffic and over which first-central content server and the at least one second-local content server communicate; and

transmitting content data stored on the first-central content server to the at least one second-local content server substantially on the determined unused bandwidth.

2. (Once amended) The method of claim 1, wherein said at least one second-local content server comprises a server located in a vertical services domain proximate to at least one end user terminal.

5. (Once amended) The method of claim 41, wherein:
the local content server is located in a central office that provides Digital Subscriber Line (DSL) service to the at least one end user terminal; and

the central content server is located in a hub site.

6. (Once amended) The method of claim 1, comprising the further steps of:

storing the content data transmitted to the at least one second-local content server on the at least one second-local content server; and

transmitting the content data stored on the at least one second-local content server to at least one end user terminal proximate to the at least one second-local content server.

9. (Once amended) The method of claim 6, wherein the step of transmitting the content data stored on the at least one second-local content server to the at least one end user terminal proximate to the at least one second local content server comprises the steps of:

provisioning a logical communication circuit extending from the at least one end user terminal through the network to a communication access node coupled to a first network domain, at least a portion of the logical communication circuit extending through the common link, wherein the provisioning comprises defining the logical communication circuit in terms of a layer-2 protocol defining switched connectivity through the network;

at the data switch, examining communicated information in transmissions from the customer premises, for a protocol encapsulated within said layer-2 protocol, to distinguish transmission types;

forwarding each detected transmission of a first transmission type from the data switch to the communication access node over the logical communication circuit defined in terms of the layer-2 protocol; and

forwarding each detected transmission of a second type, different from the first transmission type, to a second network domain logically separate from the first network domain, wherein the at least one second-local content server is coupled to the second network domain to receive at least one transmission of a second type for control of the step of transmitting the content data stored on the at least one second-local content server to at least

one end user terminal proximate to the at least one second local content server.

10. (Once amended) A method as in claim 9, further comprising the steps of:

receiving first downstream transmissions intended for the at least one end user terminal at the data switch, over the logical communication circuit from the first network domain;

receiving second downstream transmissions intended for the at least one end user terminal from the second network domain at the data switch, content data from the at least one second local content server; and

inserting the second downstream transmissions into the logical communication circuit, to combine the first and second downstream transmissions for communication over the logical communication circuit from the data switch to the at least one end user terminal.

12. (Once amended) The method of claim 1, wherein a part of the bandwidth of the common link is reserved for transmitting the content data stored on the first central content server to the at least one second local content server to prevent the loss of a session between the first central content server and the at least one second local content server.